Volunteer Firemen

Professional Journal of the Volunteer Firemen's Section of the National Fire Protection Association

Volume I, Number I | BOSTON, MASSACHUSETTS | October, 1933

Acme.

Conflagration at Ellsworth, Maine.

$1,350,000 Fire Fought by Fire Departments of Ellsworth and Nine Other Communities—Almost Wholly Volunteers.

On May 7, 1933, the City of Ellsworth, Maine, with a population of 3500, was nearly destroyed by a conflagration. A total of 127 buildings were consumed by the fire. The area burned was approximately three-quarters of a mile long and about one-third of a mile wide. The property destroyed included 50 dwellings, 45 mercantile buildings, 10 storehouses, 2 churches, a fire station, a city hall, a shipyard, and 16 other buildings. The city hall and six of the mercantile buildings were of brick-joisted construction; all the rest were of wooden construction.

Combustible frame construction, wooden shingle roofs, and a high wind, combined with limited water supplies and fire fighting facilities, were the factors primarily responsible for this conflagration. Of the 50 dwellings burned, 49 had wooden shingle roofs and the spread of the fire over these roofs was responsible for the rapid development of the conflagration.

The water system was not equal to the demand placed upon it, either as to pumping or storage capacity or as to the size of mains. It was severely overtaxed by the number of hose streams taken from it at the start of the fire.

While the fire departments fighting this fire did the best they could, sufficient equipment was not quickly available to control it.

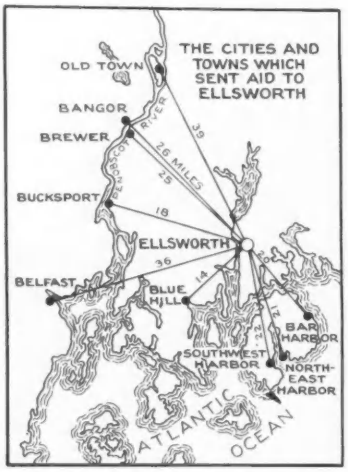
Story of the Fire.

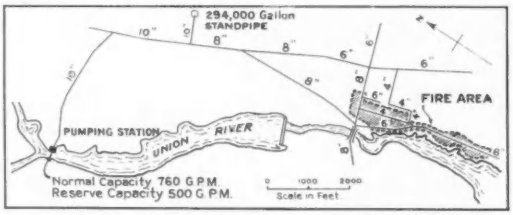
The fire started in an old two-story frame building which was used for the storage of old lumber. The location of this building is shown on the map. The fire was discovered about ten o'clock in the evening by two boys, who telephoned an alarm to the fire department. The two pumpers in town responded promptly, each with a driver. The volunteers, most of whom lived near by, were at the scene of the fire within a few minutes. The volunteer department from Ellsworth Falls, two and one-half miles

away, responded promptly and within a short time four hose lines were directed on the burning building. The combustibility of this building made the spread of the fire very rapid and the hose streams had little effect. The burning brands from the wooden shingle roofs soon ignited the roofs of other buildings and the fire spread rapidly through the congested district of the city. The intense heat and flames forced the fire department to abandon some hydrants and leave the hose lines with water still running. This resulted in considerable loss of water and pressure and handicapped fire department operations at other points. The ignition of the shipyard, which was some distance from the main fire, was probably due to the firing of some dry grass by flying embers. The grass fire spread to some piles of cord wood and thence to the near-by buildings of the shipyard. More than twenty valuable motor boats and yachts were destroyed.

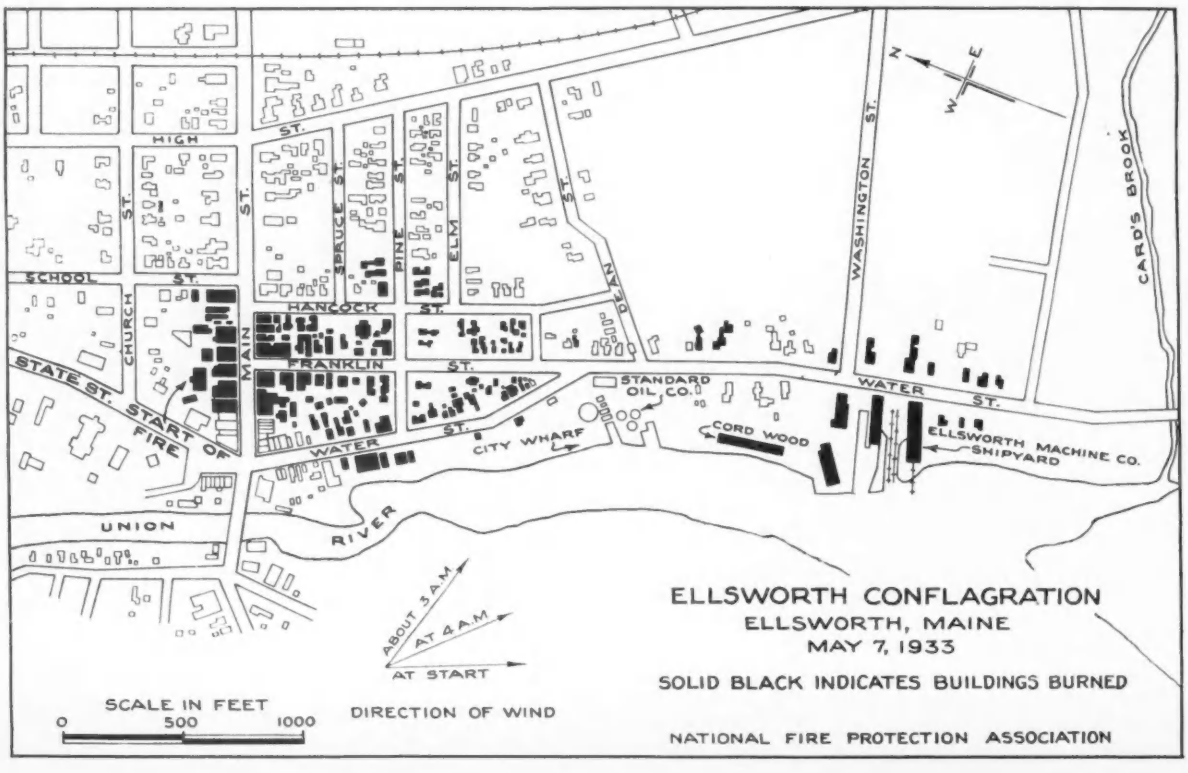
Fire Department Operations.

The Ellsworth Fire Department consists of two paid drivers and sixteen volunteer firemen at the central station and twelve volunteers at Ellsworth Falls. They are under the command of the Chief and three assistant chiefs, all of whom are volunteers. The apparatus at the central station consists of a 350-gallon motor pumper and a 600-gallon pumper. The company at Ellsworth Falls was equipped with a 250-gallon pumper. This force might be considered adequate for ordinary fires, but with the conflagration well under way it was necessary to call for assistance from other cities and towns, the nearest of which was fourteen miles away. The map accompanying this article indicates the response of other city departments to the conflagration. Within an hour after the start of the conflagration apparatus began to arrive from the outside and nine cities and towns contributed a total of eleven pumpers ranging in capacity from 350 to 750 gallons per minute. A light truck with a forest fire pump and water tanks sent over from Bar Harbor did some very effective work in wetting down roofs in the residential section. All of the out of town apparatus had standard hose couplings, so that they all could connect with the Ellsworth hydrants and to each other's hose lines. Most of the pumpers from out of town took





Water Supply and Distribution System of Ellsworth, Maine.



suction from the river. Laying of long lines was necessary to reach the fire from the river. However, the help received from the out of town companies was of great value and was an important factor in preventing much greater destruction.

Water Supply.

An accompanying map indicates the water supply from the city. The pumping station was located about two and one-half miles from the center of the city. There are two motor-driven centrifugal pumps with a combined capacity of 760 gallons per minute capacity, driven by either an electric motor or by a gasoline engine. The numerous hose lines laid from hydrants in the fire area shortly after the start of the fire severely taxed the water system. Many of the hose streams were very weak. As the fire spread through the residential section, many service connections were broken off, which further depleted the water supply and lowered the pressure.

Loss of Records.

An interesting circumstance of the conflagration was the destruction of most of the important city records. These were located in a vault in the large brick city hall. When the fire approached that building an attempt was made to save it by dynamiting an intervening frame dwelling, but in the excitement there was some confusion in arranging the wires and the charge failed to explode. A second attempt was successful, but blew out the windows of the city hall, allowing fire to enter. The building was gutted by the flames.

Before this someone had made an attempt to remove the records in the vault to a place of safety and had opened the vault door and made one trip out, leaving the vault door open. Before a second trip could be made the fire had involved the building and the remaining records were destroyed. It is probable that the vault would have protected its contents if it had been left alone. The cost of replacing the records that can be replaced will be about fifty thousand dollars.

Amount of Loss.

The property loss is estimated at $1,350,000, exclusive of records and indirect losses. Approximately $275,000 of the loss was in the shipyard, where more than twenty yachts and motor boats were in storage. Among those destroyed were two 75-foot yachts valued at $50,000 each. There was, fortunately, no loss of life.

International.

Another Maine Conflagration.

Auburn, Maine, Has $1,500,000 Fire One Week After Ellsworth Disaster.

On May 15, 1933, 250 buildings were destroyed in the City of Auburn, Maine. The fire occurred in the congested mercantile and residential district, consisting largely of frame apartment houses and one- and two-family dwellings. The area of the territory involved in the fire was about half a mile long and 600 feet wide. The fire destroyed 125 residences, 22 mercantile buildings, 2 bakeries, 2 packing plants, 2 garages, 2 schoolhouses, a slaughter house and a synagogue. About 422 families were temporarily rendered homeless.

The fire was started by a mentally deficient 11-year-old boy. It started in a two-story frame automobile repair shop and spread so rapidly that five buildings were on fire when the first fire company arrived. The rapid spread of this fire was due to the combustible construction and the wooden shingle roofs. One factor contributing to the rapid spread of this fire during its early stages was the fact that the fire department was already engaged in fighting two fires, alarms for which had been sent in just previous to the outbreak of the conflagration. The engine company ordinarily stationed near the start of this conflagration was covering in at headquarters, approximately one mile away from the start of the fire.

The property loss was estimated at between $1,500,000 and $2,000,000. The large number of persons rendered homeless may be accounted for by the fact that the dwellings were largely occupied by mill hands and the number of persons to each house was high. There was no loss of life and but few minor injuries. Eleven cities and towns sent aid to Auburn, the nearest being the city of Lewiston just across the river from Auburn and the farthest being the town of Rumford, forty-five miles away.

This striking picture shows how hopelessly the bucket brigade is at a disadvantage. According to the Farm Fire Protection Committee of the National Fire Protection Association, even when water is available there must be pumps to provide pressures and hose and nozzles to make it possible to put water on the fire in sufficient quantities to be effective.

Water Systems for Fire Protection.

The Problem of Such Systems in Rural and Farm Districts.

The following report on Water Systems for Fire Protection on Farms was developed by the Farm Fire Protection Committee of the National Fire Protection Association for presentation at the annual meeting of the Association in Milwaukee in May, 1933. We believe that this report is of general interest to volunteer firemen and it follows in its entirety.

Foreword.

Effective fire fighting at rural fires depends to a large extent upon the facilities provided by individual property owners. For this reason proper consideration of fire protection for farms by individual property owners is very necessary. It is the purpose of this report to suggest ways and means for the most efficient utilization of available water supplies in extinguishing farm fires and to present certain essential features which should be provided to give reasonably adequate fire protection when new water systems are contemplated.

General Requirements.

The most important factors in the successful extinguishment of fires with minimum damage are early discovery and rapid action upon them before they reach dangerous proportions. For first aid protection portable fire extinguishers are essential. Such first aid protection, however, is designed only for the control of fires in their incipient stage and further water supply must be provided as a second line of defense.

There are many variations in the source and method of installation of water supplies both for domestic use and for the fighting of fire. In some favored localities a supply may be obtained by gravity at suitable pressures, but the great majority of farms must depend on pumping from wells, springs, or streams. The degree of protection to be provided is influenced by the value of the property to be protected, by economic conditions, and by consideration of whether rural fire-fighting organization and equipment exists or is likely to be available.

Before considering the several systems of supplying water under pressure, the amounts of water to be provided to give reasonably adequate protection should be determined. An effective fire stream through a ¼-inch nozzle requires 10 gallons a minute, and this quantity should be available for a period of at least two hours. It is not assumed that such a supply will extinguish a fire well under way in a barn or other large building. In such cases, protection of adjoining buildings is the principal function, and this protection must be available until the fire is well burned out. This amount will allow as effective fire fighting as can be expected without fire department equipment. The necessary amounts and methods of supply for fire department use will be covered later.

Gravity Systems.

Gravity supplies usually present special problems in each case. Many of these require the construction of dams to store up stream flow during the rainy season. The size of pipe line to be installed from the supply is dependent on two factors—the total fall or head from the point of supply to the farm, and the length of line required. The available head determines the full pressure when no water is flowing, and this is decreased by the loss due to friction of the water passing through the pipe, which is greater for smaller pipe sizes and increases in direct proportion to the length of line. A supply unsafe for human consumption may be utilized for stock, irrigation, and fire protection. Where the available fall or head is not great and gives a pressure of materially less than 50 pounds, the supply may still be utilized for farm purposes and part of the flow diverted to a storage tank as later described for use by rural fire equipment, or, if this is not available, to supply a pump to the fire protection piping.

Wells.

The great majority of farm water supplies are from wells, which may be of either shallow- or deep-well type, and of dug, driven, or drilled construction. Shallow wells are those in which the water is sufficiently close to the surface so that the pump may be located above ground and obtain its supply by suction. In deep wells the pumping unit, or at least a portion of it, is placed in the well below ground. Shallow wells, usually of the dug or driven type, are dependent

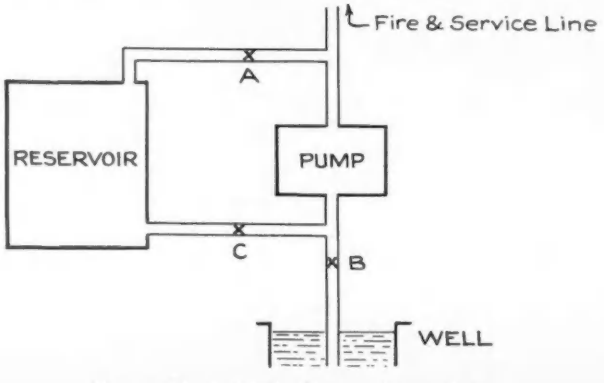


Diagram Showing Typical Pressure Storage System.

A Comparison of Hose Streams

Although of some value on incipient fires or in wetting down adjacent buildings, a garden hose stream like the one illustrated from an ordinary pressure water system with a small electric pump, has too limited a capacity (3½ gallons a minute) to be effective on a fire which has gained much headway.

This illustration shows the minimum sized hose stream believed to be reasonably adequate for farm fires. The hose is 1½-inch and a ¼-inch nozzle is used to conserve water. With 30 lbs. pressure at the nozzle the stream has a capacity of approximately 10 gallons per minute and an effective range of about 50 feet. A two-hour supply for this stream or 1200 gallons of water should be provided.

A good fire stream through 1½-inch hose with ½-inch nozzle is obtainable where there is a fire department pumper available which can take suction from a large reservoir, pond or stream. With 50 lbs. pressure at the nozzle such a stream will deliver 50 gallons of water a minute at an effective range of about 75 feet. This is, of course, smaller than the stream fire departments can supply with larger (2½-inch) hose and nozzles.

upon the seepage of water through the ground. They should not be depended upon except when records of similar wells in the neighborhood show that 10 gallons a minute can be supplied for a period of two hours even during a dry summer season. Drilled deep wells are the most dependable for fire protection, drawing their supply from more distant and greater areas and being much less likely to be affected by local droughts. The slightly greater cost of a 6-inch drilled well is usually fully justified by the increased supply made available. Wells should be tested by pumping for two hours before purchasing the permanent equipment, the size of which can then be based on the capacity determined.

Pressure Systems.

The smallest commercial water pressure systems have a capacity of 210 gallons an hour (3½ gallons per minute) or even less. While this will furnish a stream, through ordinary garden hose, of some value in combating incipient fires or in wetting down adjacent buildings, it cannot be expected to be effective on a fire which has gained any headway. Where such systems are already installed, connections and hose should be provided as later outlined. When a new system is being planned or a replacement of equipment made, it is urged that a capacity of at least 600 gallons an hour (10 gallons per minute) be specified and the supply increased to meet this demand, or storage added if necessary. The additional cost for the larger unit necessary for fire protection is partially offset by the increased quantities of water available for other uses, by the more rugged construction of units, and by the fact that they are seldom required to pump at full capacity under normal conditions, thus decreasing maintenance costs.

When a shallow well is available with a supply sufficient for domestic use, but not for fire purposes, reserve capacity may be provided by a storage tank either just below the ground or elevated. Twelve hundred

Suction ponds made by building a dam across a small stream provide a supply of water for fire department pumpers. Illustrated is one of 84 such places in rural territory provided for the Town of Brunswick, Maine, which protect more than 420 farm buildings.

gallons are required to supply fire demands for two hours, but experience has shown that storage tanks or reservoirs are usually maintained only about three-fourths full, so a storage capacity of 1600 gallons should be provided. Elevated storage has the advantage of increasing the delivery pressure of the pump. Connections to enable a pump to deliver from storage in this way are easily made, as shown in the diagram at the foot of page four.

With a surface reservoir, valve "A" is closed at all times except when filling the reservoir. Valve "B" is a check valve normally closed except when drawing water from the well. Valve "C" is closed except in event of fire. With an elevated reservoir, valve "C" is closed except for fire, valve "A" is open except at time of fire, valve "B" is normally closed for fire.

Two-inch pipe lines should extend from the pump to outlets fitted with connections for 1½-inch hose. Outlets should be so spaced that all sides of every building will be within 100 feet of at least one outlet. These lines may also have connections for other farm purposes. Piping must necessarily be buried or otherwise protected from freezing in cold climates. Outlets may be in the form of riser pipes with the valves below ground and operated by extension stems.

Fire Fighting Equipment.

Fire fighting equipment should include three 50-foot lengths of 1½-inch hose stored in 100- and 50-foot lengths, with ¼-inch smooth fire nozzles attached. The shorter length should be used to lessen friction loss when fires are close to the water connection. If hose is used for other farm purposes, it should be returned every day to its proper place after use. It is suggested that rubber hose be used, as it is much less susceptible to damage from heavy use and unfavorable conditions of storage than cotton, rubber-lined, or, particularly, linen. When capacity is not greater than 10 gallons a minute, not more than one hose stream should be operated at a time or the effectiveness of each will be greatly reduced. Power sprayers or other farm equipment can also be utilized for supplying water in event of fire.

Hose, ladder, and other fire equipment and, preferably, the pump for the water system as well, should be stored in a centrally located building or addition to a building having at least a moderate degree of fire resistance. This will insure that the fire equipment will be readily available and not subject to damage during the early stages of a fire. The door of the building should never be locked. Such a building can be made reasonably fire-safe, and attractive as well, by covering the studding on each side with metal lath and plastering with one inch of Portland cement stucco. The roof should have a good quality of incombustible covering.

Water Supplies for Fire Department Use.

When the response of fire equipment is assured, through the establishment of a rural fire department or by other arrangements, it becomes justifiable and necessary to provide additional water supply, for even with motor fire apparatus, only fires of limited extent can be handled by the chemical or water tanks carried on the truck. Where a stream or pond with dependable supply is within a few hundred feet of farm buildings, the problem of additional supply is simple; it is only necessary to furnish easy access to the supply for the fire department pumper. This may mean constructing a roadway to a spot of firm ground from which the pumper may operate or, possibly, filling in to provide such a landing stage. The pond may need to be deepened or the stream dammed to make a pool from which suction may be taken. Such ponds or streams may be made attractive and are also often of practical value in furnishing additional water supplies for stock or for other productive purposes.

In other instances it may prove better to dig a small canal to a suitable point for operation of the pumper or to extend a tight pipe line to the farm with a hydrant in the yard from which the pumper may take suction. Fire engines usually carry at least 20 feet of suction hose, but under average conditions a pumper cannot be expected to lift water more than 15 feet. Consultation with the fire department officials will be valuable in deciding the exact layout which should be provided.

The rural fire engine of Easton, Maryland, in action at a smoky fire, drafting water from a creek. Where there is such a source, drives or small piers should be provided so that fire engines can get close to the water. A dry hydrant with a short run of pipe to deep water can also be used to furnish the suction connection.

Rural fire departments commonly use a ½-inch nozzle which requires about 50 gallons of water a minute (3000 gallons per hour) for an effective stream. Sufficient water supply for at least one hour's pumping should be available.

It is best to make the full capacity of the tank or reservoir 4000 gallons to allow for the tank not being full at all times. Such capacity will require a tank 8 by 8 by 8½ feet. Tanks may be purchased ready to install or built in place by farm labor. Various materials may be used according to their availability. Whatever materials are used should be permanent and suitable for underground use. The tank should be centrally located and have suitable manhole opening for access by the fire department for suction purposes. Regular inspections to insure full storage should be made. Where storage is also to be used to supplement an inadequate supply for the farm water system, the capacity should be increased to 5000 gallons, since part of the first aid supply will be used up before the fire department arrives. Where the tank is to be used in connection with house piping lines, provision should be made for regular flushing, cleaning and other sanitary safeguards.

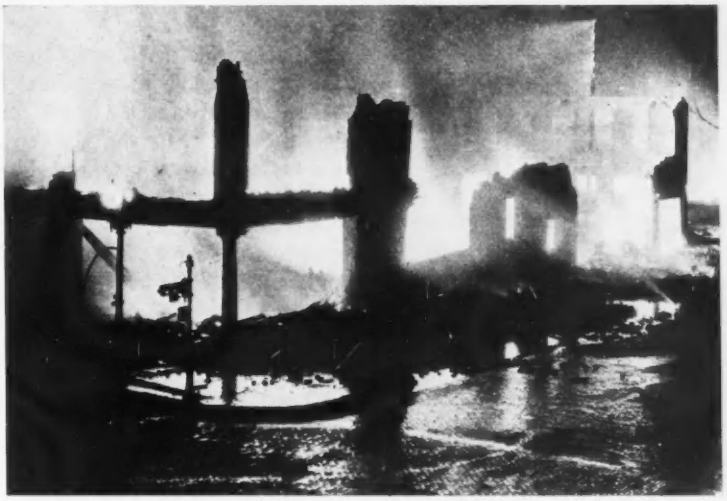
Private Fire Pumps.

Where there is no possibility of fire department response and the value of buildings, implements, and stock warrants more protection than is afforded by a small water system, greater protection can be obtained by use of a separate fire pump supplied from a 4000-gallon storage tank. This pump should have a capacity of at least 50 gallons per minute against 60 pounds pressure, permitting the delivery of a satisfactory stream through a ½-inch nozzle. Power for operating the pump may be supplied by an electric motor or by a gasoline engine, either of which should be directly connected to the pump or located near by. If no other means are available, arrangements may be made to drive the pump from the power take-off of a tractor. Care should be taken, however, to keep the tractor within reasonable distance of the pump house so that if a fire occurs the pump may be put into operation with a minimum delay. Unless the piping is very short and direct it should be increased from 2- to 2½ or 3-inch diameter.

Conclusions.

This report covers only those minimum requirements for fire protection which it is believed should be provided on every farm. In many cases the values subject to fire will warrant systems of greater capacity than those outlined and, when not under the protection of an organized fire department, will warrant the installation of a fire protection system which will do more than extinguish small fires and cover exposures. Such systems will need to be individually planned and designed.

It is believed that the value of the fire protection as herein recommended fully justifies the increased cost, and that whenever a water system is installed for domestic purposes sufficient additional capacity should be provided for fire protection purposes.



A view of the McPherson, Kansas, fire which got out of control because of the absence of the volunteer fire department at a firemen's convention.

Disastrous Fire at McPherson, Kansas.

On June 13, 1933, a serious fire completely destroyed a theatre, lumber yard and mercantile building in McPherson, Kansas. The circumstances of the development of this fire are of particular interest to volunteer firemen.

The fire started in a commercial truck stored in the lumber yard. At the time all but two members of the volunteer fire department in McPherson were away from the city attending a firemen's training school in Wichita. The fire was discovered at 10:20 in the evening by a taxi-cab driver and was probably due to defective wiring in the truck. There were no fire extinguishers available. If there had been, undoubtedly the fire could have been extinguished in the truck before it spread to the lumber shed. The fire station was just across the street from the lumber yard. The two firemen who had remained at home could drive the apparatus, but neither could operate the pumper. The sheds in the lumber yard soon ignited and the spread of the fire was very rapid. Citizens volunteered their services but lacked experience in fire fighting. When it appeared that the fire was out of control requests were made to the cities of Lindsborg, 14 miles distant, and Hutchinson, 34 miles distant. The former responded with a 750-gallon pumper and three volunteer firemen, and the latter city sent a company of four men and a 750-gallon pumper. Hose streams, six from pumpers and three direct from hydrants, were used on the fire.

Long before this outside help had arrived the fire had spread to near-by buildings and an area of about 42,000 square feet was burned over.

Undoubtedly if more of the members of the local volunteer fire department had been in the city the fire would have been controlled before it gained much headway. The loss would have been unquestionably much greater had it not been for the able assistance rendered by the Lindsborg and Hutchinson fire departments. Hydrants and hose threads in these cities were all standardized, so there was no delay in getting into service once they arrived.

Had there been a strong wind it is quite likely that much more property would have been involved and the fire might have developed into a conflagration.

This was the second serious fire in McPherson within sixty days. A large office building was destroyed in the previous fire. The two fires have been a heavy blow to the city.

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Volume I Number I

Editorial

In presenting this first issue of a professional journal for volunteer firemen, it is presumed that many of its readers will be unfamiliar with the plan behind the organization of the Volunteer Firemen's Section of the National Fire Protection Association. The description of the aims and activities of the National Fire Protection Association is given on the following page to show the background of long experience in fire activities to which the Volunteer Firemen's Section is now added.

The organization of the Volunteer Firemen's Section is largely due to the enthusiasm of a volunteer fireman, Mr. William Draper Brinckloe, of Easton, Md. Anyone who ever met Mr. Brinckloe readily appreciated his zeal and love for volunteer fire service. Due to his able arguments and eloquent appeals, the Board of Directors of the National Fire Protection Association were persuaded at a recent meeting to organize the volunteer Firemen's Section. We regret that Mr. Brinckloe did not live to see his dream realized. While he was actively at work developing plans for this section he was stricken down with pneumonia and died within a few days.

It was Mr. Brinckloe's conviction that a splendid opportunity existed for some contact among volunteer firemen on a national scale. There has never been up to this time a national organization of volunteer firemen. There has never been a common meeting ground where volunteer firemen from all sections of the country could go for help. There has never been a national magazine or bulletin issued for the volunteer firemen of the country. Mr. Brinckloe pointed out that the National Fire Protection Association was not fulfilling its function if it did not provide the same valuable information to the volunteer firemen of the country that it was providing for the paid departments, for the state fire marshals, for the fire prevention committees of local Chambers of Commerce and boards of trade, for the industrial fire chiefs, and for the large army of its members interested in the various phases of fire protection and fire prevention work. Some volunteer firemen and fire companies were already members of the Association. Letters to these members asking their opinion on the creation of the Volunteer Firemen's Section elicited their enthusiastic response. Some of these letters appear on another page of this journal.

At the thirty-seventh annual meeting of the National Fire Protection Association in Milwaukee in May a conference of members enthusiastic over the section was held, and at that conference the following five points were set forth as a guide for the organization of this section:

1. The interchange of experience among volunteer fire departments.
2. The development of a medium for broadcasting new developments and new ideas of benefit to volunteer fire departments.
3. The development of standard practices and methods for fire fighting by volunteer fire departments.
4. The promotion of fire prevention work in rural districts.
5. The promotion of the organization of new volunteer fire companies and extension of the service of existing companies where necessary.

The above five points constitute, we believe, a platform which every volunteer fireman would readily support. We believe that closer co-operation between the volunteer firemen of the country and the National Fire Protection Association can result only in good to both.

CLASSES OF MEMBERSHIP
National Fire Protection Association

ORGANIZATION MEMBERSHIP

State and regional associations of volunteer firemen shall be eligible to organization membership in the National Fire Protection Association and entitled to six votes in the affairs of the Association and four sets of the publications which go regularly to N.F.P.A. members and members of the Volunteer Firemen's Section.—Dues $60 per year.

MEMBERSHIP FOR INDIVIDUALS

Any volunteer fireman who so desires may apply for regular membership in the National Fire Protection Association. This entitles him to one vote in the affairs of the Association and a complete set of the publications which go regularly to N.F.P.A. members and members of the Volunteer Firemen's Section. — Dues $10 per year.

VOLUNTEER FIREMEN'S SECTION

An individual volunteer fireman shall be eligible to membership in the Volunteer Firemen's Section. He shall receive one copy of the monthly journal of the Volunteer Firemen's Section mailed regularly to his home address.—Dues 50c per year.

Because of the very low individual dues a minimum of 20 members from one company is required. Membership may be applied for by one member of the company collecting 50c for each of the 20 or more members and making a single remittance for the group, or the company may vote to take out membership for the entire company and make a single remittance from the company treasury. In either case the company itself is thereby made an eligible member of the National Fire Protection Association and entitled to one vote and full participation in the affairs of the Association. Also a complete set of the regular N.F.P.A. literature is mailed to company headquarters.

The National Fire Protection Association

Since 1896 the Clearing House for Authoritative Information on Fire Prevention and Fire Protection — The Background With Which It Takes Up the Problems of Volunteer Firemen.

The National Fire Protection Association was organized in 1896 by a group of men interested in reducing the fire losses throughout the United States and Canada. The object of the Association as set forth on its letterhead is the following:

"To promote the science and improve the methods of fire protection and prevention; to obtain and circulate information on these subjects and to secure the co-operation of its members in establishing proper safeguards against loss of life and property by fire."

From its small beginning thirty-seven years ago the Association has gradually grown to the point where it has over three thousand members in all parts of the world. The Association never has become commercial in character and has steadfastly followed its objective of doing everything in its power to reduce loss of life and property from fire. Membership in the Association has never been restricted and any individual or concern interested in any phase of the reduction of the fire loss and fire fighting is eligible to membership. There is no other organization that is similar in character throughout the world. The Association has become the clearing house for all that is authoritative on the subject of the fire waste, fire protection and fire prevention.

Technical Standards

The technical standards developed by the Association are widely used as the basis of state, provincial and municipal legislation, as insurance requirements and as a guide by property owners. The following list of the current technical committees of the Association gives an idea of the importance of this phase of the Association's activity and variety of subjects covered:

Automatic Sprinklers
Aviation
Blower Systems for Heating, Ventilating, Stock and Refuse Conveying
Building Construction
Construction Operations
City Planning and Zoning
Dust Explosion Hazards
Electrical
Electric Railway Car Houses and Cars
Farm Fire Protection
Field Practice
Fire Pumps
Fire Record
Fireproofing Processes
Flammable Liquids
Forest
Fumigation Hazards
Garages
Gases
Hazardous Chemicals and Explosives
Hydrants, Valves and Pipe Fittings
Manufacturing Risks and Special Hazards
Marine
Piers and Wharves
Protection Against Lightning
Protection of Openings in Walls and Partitions
Protection of Records
Public Water Supplies for Private Fire Protection
Pyrotechnics
Safety to Life
Salvaging Operations
Signaling Systems and Thermostats
Small Hose Couplings
Spontaneous Heating and Ignition
Storage of Combustible Fibres
Tanks

The work of the preparation of standards and the revision of existing standards goes on unceasingly so that the standards are in step with progress in science and invention. There is no public effort in the history of the nation to which there has been so freely given over so long a period so much thought and painstaking technical investigation as the National Fire Protection Association.

Education — Publicity

Aside from its technical work, the Association devotes a large proportion of its time and effort to the education of the general public in the prevention of the fire waste. Literature distributed by the Executive Office of the Association is prepared with the object of educating people generally in fire prevention. It is put into popular form so that anyone, whether familiar with the subject or not, is able to educate himself, protect his own property, and give advice to his neighbor. The International Fire Prevention Week campaign conducted throughout the United States and Canada every fall has been sponsored and promoted by the National Fire Protection Association. The Association meets annually in a four-days' convention at which the members have an opportunity to discuss the latest developments in fire protection and prevention and to act upon the reports of the technical committees. The Proceedings of the convention are stenographically reported and issued in printed form so that all members may study the reports and discussions thereon at their leisure. The Association issues a QUARTERLY MAGAZINE which is unique in providing special articles on fire hazards, fire protection and fire prevention. The Association maintains a Fire Record Department and the information developed in this department is printed in the magazine, providing an indispensable amount of information for those who are interested in fire causes and fire prevention. All important fires that occur throughout the world, with special references to their origin, extent and manner of extinguishment are described in the QUARTERLY MAGAZINE. The Association issues a monthly news bulletin to its members, giving current items of interest on any developments in the field so that the members are constantly kept up to date on these activities. Bulletins on various fire hazards and special posters are issued from time to time for general public distribution.

Field Service

The Association in 1924 developed a field service for contacting with municipalities throughout the country and maintains a staff of field engineers to organize, stimulate and encourage local fire prevention activities. These engineers recommend definite programs for the improvement of municipal fire hazard conditions in cities throughout the country. The value of the Association's field work has already been demonstrated in reduced fire losses in the cities in which the engineers have worked.

Membership

Membership is open to any individual or organization interested. No initiation fee is charged. The only expense is the annual dues according to the class of membership to which an applicant is eligible. Classes of membership are described on the preceding page. Membership in the Association pledges no one to any special course of action. The headquarters of the Association are at 60 Batterymarch Street, Boston, Mass. Sample copies of the literature issued by the Association or information on the work of the Association will be gladly sent to anyone interested.

Opportunities for Training.

Summer Short Courses and Vocational Teacher-Training Courses are Open to Volunteer Firemen.

During the past few years there has been a rapid development throughout the United States in general courses of training for firemen. A survey of what has been going on in this respect was recently conducted by the Fire Service Extension Committee of the National Fire Waste Council. That committee presented a report on their survey at the meeting of the Fire Waste Council in Washington in April. The following is a summary of the report, indicating the work that was carried on during the year 1932 in the various states of the Union.

Summer short courses for firemen at some central point or through regional schools were held in twenty-four states with approximately 9000 firemen in attendance. In fourteen additional states fire department training conferences were conducted. A summary of the activities in the states where general schools were conducted is given below:

Colorado. A two-day session called the Colorado Fire College was held at Colorado Springs. About 175 firemen were in attendance. A similar course is planned for 1933.

Florida. The Third Annual Florida Fire College was held over a three-day period. One hundred and twenty-five firemen were enrolled. The Fourth Fire College has already been held this year in May.

Illinois. The Eighth Illinois Fire College was held at the University of Illinois over a four-day period. Plans for the school were made by the Illinois Firemen's Association. A record attendance of 416 was reported.

Note: This year's school has already been conducted.

Iowa. The Eighth Iowa Short Course for Firemen was held at Iowa State College over a four-day period. Four hundred and twenty-six firemen were enrolled, a larger number than at any previous school in the state.

Note: The Ninth School has already been held this year.

Kansas. The Fourth Annual Kansas Fire School was held over a three-day period, with 150 firemen representing 53 cities registered.

Note: The Fifth School has already been held this year.

Kentucky. A regional fire school covering part of the state was held for a three-day period with 72 firemen in attendance.

Louisiana. The Second Annual Short Course for Firemen was conducted during a week in April and was attended by 71 firemen representing 32 different departments.

Maryland. The Third Annual Short Course for Firemen was conducted at the University of Maryland over a three-day period with an attendance of 105.

Note: The Fourth School is to be conducted this fall.

Michigan. The Fourth Annual Fire College for Michigan firemen was conducted over a four-day period.

Minnesota. The Fifth Annual Northwest Fire School was conducted at the University of Minnesota over a five-day period. The enrollment of the school was 303 and 70 cities and towns were represented. The Sixth Annual School will be held this fall.

Mississippi. Seven regional fire schools were conducted with a total attendance of 205 firemen.

Missouri. Regional schools were held in three Missouri cities with an attendance of nearly 400 firemen.

Montana. The Second Annual Fire School in Montana was held over a four-day period. Plans have been made to hold the school annually in the future at the Montana State College.

New Mexico. The Third New Mexico Fire College was sponsored by the New Mexico State Firemen's Association and was held over a three-day period with 115 firemen, representing 31 different fire departments, in attendance.

Note: The Fourth School in New Mexico has already been held this year.

New York. Regional training was carried on at eighteen zone centers under the direction of the New York State Association of Fire Chiefs. Three thousand four hundred and thirty-five firemen from 53 municipalities attended these schools. Similar schools are being carried on during the present year.

Ohio. The Third Annual Fire School was held at the State University over a five-day period with an attendance of 314 firemen.

Oregon. A firemen's school was held at the state college over a three-day period and has already been repeated during 1933.

South Dakota. The Third Annual South Dakota Fire School was held over a three-day period with 448 firemen in attendance.

Note: The Fourth School has already been held this year.

Texas. The Third Annual Texas School for Firemen was held at the Agricultural and Mechanical College of Texas over a four-day period with 383 men representing 150 cities in attendance.

Note: The Fourth School was held this summer.

Washington. The Washington State Firemen's Association conducted a fire college in August for a three-day period. Two hundred and fifty firemen, representing 75 cities, were in attendance.

West Virginia. The Second West Virginia Fire School was held over a three-day period at the State University with an attendance of 304. The Third School was held this summer.

Wisconsin. The Fourth Annual Wisconsin Course in Firemanship was held at the State University over a four-day period with over 300 firemen registered, representing more than 75 cities and towns.

In addition to these state-wide training courses listed above, the Federal Board for Vocational Education has conducted training courses in 40 cities in 24 states, with a total enrollment of 1180, and training courses in 79 cities in 11 states with a total enrollment of 2850.

The popularity of these training schools and regional conferences in providing additional practical drill evolution work and information for firemen in every city, town and village offers a very valuable opportunity to the volunteer firemen to increase their knowledge of their profession at small cost in time and money. The report of what has already been accomplished as noted above is most encouraging. We believe that the time is not far away when some sort of special training will be available in every state of the Union for every volunteer fireman. Within the past few weeks the Fire Chiefs' Club of the State of Massachusetts has developed and is putting into operation a comprehensive plan for the training of firemen throughout that populous state. Aside from the knowledge gained at these courses, they serve a very valuable function in bringing closer together firemen from various districts throughout the state. The opportunity to exchange ideas with one's brother firemen is also very important. We predict continued and rapid increase in the number of these training schools throughout the country.

Letters to the Editor.

National Fire Protection Association,
60 Batterymarch Street,
Boston, Massachusetts.

Gentlemen:—

I hear that it is proposed to establish a "Volunteer Firemen's Section" at the next annual meeting of your Association. I also am advised that the N.F.P.A. would like to know if doing this meets with the approval of the various volunteer firemen's organizations throughout the country. I was President of the Southwestern Volunteer Firemen's Association of the State of New York this past year. I am also a member of the Erie County Volunteer Firemen's Association of this state and would be pleased to present to that body such information on this matter as you may see fit to make and shall appreciate hearing from you. It strikes me your Association can accomplish much good by paying particular attention to volunteer firemen. I may add that I have often wondered why some enterprising man did not start a magazine devoted to the interests of these volunteers. We have no national organizations, no means of exchanging information from all parts of the United States.

Very truly yours,
GEORGE B. ABBOTT,
Hamburg, New York.

* * * *

National Fire Protection Association,
60 Batterymarch Street,
Boston, Mass.
Gentlemen:—

I have taken a great interest in the protection of life and property by volunteer fire companies, and, in fact, have been president of the Union Fire Association for a number of years; and for the past three years I have served as Chairman of the Lower Merion Township Fire Department, composed of six volunteer companies.

During the past four years my own company has responded to 255 alarms, involving property having a total value of $1,113,100, and, due to the prompt and efficient fire extinguishing methods, the total fire loss for the four years was only $53,650.00, Our fire district is approximately three square miles, with 75% of the territory built upon and within which the value subject to fire has been estimated at eighty millions of dollars.

I think the suggestion regarding a Volunteer Firemen's Section is worthy of serious consideration.

Very truly yours,
WALTER C. NEELY,
Bala-Cynwyd, Pa.

* * * *

National Fire Protection Association,
60 Batterymarch Street,
Boston, Mass.

Gentlemen:—

Following are some questions we would like to see you answer through your volunteer section.

What should a volunteer fire chief know about the purchase of fire hose, without depending on high pressure salesmanship?

How do you manage salvage operations, especially when it is impossible to have the same men at all fires?

Should a volunteer fire department render services, outside of city limits, and what charge should be made for such services?

Practical method for figuring fire loss on small homes?

What are the best methods for ventilating one-story homes and one-story business buildings in the average small town where there is a volunteer fire department?

Would like to see a room or building with every type of partition, window and door casing, fire stopped and otherwise, drawn or photographed so that the proper method could be used to remove same in overhauling at fires.

Please use volunteer fire department language in your volunteer section; most write-ups are for the big city paid departments.

As a rule a volunteer department will not have the same two men at every fire.

JIM WILSON, Secretary,
Englewood Volunteer Fire Department,
Englewood, Colorado.

* * * *

National Fire Protection Association,
60 Batterymarch Street,
Boston, Mass.

Gentlemen:—

As to the organization of a Volunteer Section, I believe this is a good move. In this state we have over 125,000 volunteer firemen and they have real problems. They need much constructive advice and they are always willing to follow such advice if it is given from sources backed by practical and workable plans.

This Section, to my mind, will be just as useful and popular with the volunteers as the members will make it. That is to say that the selection of the personnel will have much to do with the success.

There is a tremendous amount of work to be done along these lines when we consider that about one-half of the national fire losses are in the rural districts and that nearly all rural fire fighters are in the volunteer class.

Yours very truly,
E. M. RANCK,
Chairman, Fire Prevention Committee,
The Firemen's Association of the State
of Pennsylvania, Lancaster, Pa.

* * * *

National Fire Protection Association,
60 Batterymarch Street,
Boston, Mass.

Gentlemen:—

I wish to go on record as favoring the establishment of the above section. I speak not only after ten years of service as Commissioner, but as a consulting fire and safety engineer with experience dating back to 1906.

The object of the N.F.P.A. is to promote the science and improve the methods of fire protection and prevention . . . and where can be found any better field for the Association's activity than among volunteer firemen?

Volunteer fire departments offer a happy medium through which to register *Consciousness* of the fire waste and through adoption of standard practices to accomplish real results.

While the problems of holding such departments on a high level require special treatment, basically so much good will result if the general practice is standardized, that the N.F.P.A. should immediately take steps to serve volunteer firemen and departments.

Volunteer departments have and are being developed to compare favorably with paid departments; motorized apparatus permit of a wide field of activity; the present personnel is generally well educated and eager to learn and put into practice modern methods; the drill school is being recognized as essential; emergency work is finding its place in the more up-to-date department; —so all in all, the operation of the volunteer department is becoming a science, demanding attention and ACTION. Will the N.F.P.A. give it?

Chambers of Commerce, individually and collectively, are working to reduce the national fire waste. Would it not seem that once a Volunteer Fire Department becomes conscious of the need for control, that here would be a nerve center where the greatest good could be accomplished with the minimum effort. Volunteer firemen represent a vast majority of the total number of fire fighters, and in the small and moderate size community the fire department is the strongest organization and one which serves all business, industry, and the homes. Here prevention work should pay—to protect the home as well as the job.

There is no recognized clearing house for Volunteer Firemen nor code of standard practices. There should be, and where standards now exist modifications should be made to fit the purely local problems incident to the carrying on of a volunteer organization. Codes and procedure which may properly be used in the larger cities cannot be made to apply to the smaller territories. In the one case it is PAID Prevention and Protection, in the other it is VOLUNTARY Prevention and Protection.

Respectfully,
E. H. SEAMAN,
Chairman of Board of Fire Commissioners,
Wantagh Fire District, Wantagh, N. Y.

* * * *

National Fire Protection Association,
Boston, Massachusetts.

Gentlemen:—

This acknowledges your letter of May 11th concerning the organization of a volunteer firemen's section of the N.F.P.A.

I am very much pleased in that the N.F.P.A. has considered the plight of the numerous volunteer fire departments, and that it is taking steps toward the furtherance of this movement.

I have been affiliated with the volunteer fire department for some time and I firmly believe that there is considerable room for the propagation of fire prevention and fire protection in this field.

The volunteer fire department covers a

very large field, and an advisory and educational committee with this type of experience could, in my opinion, work wonders in this field.

I believe that the average volunteer fire department is handicapped, to a certain extent, by the lack of properly trained officers and their crews. There is the tendency in this type of department to use an excessive amount of water, as well as the lack of knowledge as to the proper use of their equipment. An educational campaign could help to correct some of these mistakes.

In this type of department the efficiency depends, to a certain extent, upon the rivalry and competition put up, in a friendly manner, by their brother firemen. It should be borne in mind that the ambition of every fireman is that his company get first water on the fire and that this friendly rivalry holds these departments together. There are those who will not agree with this statement, but nevertheless the pride and friendly spirit found in the departments go a long ways towards the maintenance of same.

I would like to suggest, if a volunteer firemen's section is organized, that serious consideration be given to the appointment of field men to aid in the instruction of the volunteer firemen. The field men could aid the fire departments by coming in contact with the local administrations and thus selling them the idea of the value of trained men in their departments, also the advisability of sending the officers to fire schools so that they, in turn, can give their crews up-to-date instructions in fire fighting.

The N.F.P.A. through its trained personnel can be of invaluable assistance to the volunteer, who is appreciative to the man that, through his superior training and his broader field of experience, can better fit him to carry out this service to his fellow men, which he does without thought of remuneration or recompense.

I would like to call your attention to a case in which the value of the proposed field education is brought out. A short time ago I was invited to a near-by community to speak to their volunteers and local administration on using foam producing equipment for extinguishing fires. It was pointed out to me that a fire equipment salesman was endeavoring to sell them a foam truck with which to combat class A fires in their rural districts. In my opinion this salesman was trying to sell them a lemon merely because they did not understand the principles of this method of extinguishing fires. I felt that it was my duty to tell these men that this type of equipment would prove to be very unsatisfactory and that their best move would be to purchase a piece of rural equipment built around booster tanks of large capacity.

You probably realize that there are innumerable questions and problems that these men meet up with that the N.F.P.A. could assist them with, and I sincerely hope that the N.F.P.A. will very seriously consider the proposed organization of this volunteer firemen's section and through it bolster up the volunteer fire department wherever it be found.

Yours very truly,
H. A. JOHNSTON,
Wellsville, N. Y.

Regular N. F. P. A. Publications

Volunteer fire companies enrolling 20 or more members in the Volunteer Firemen's Section will receive at their home address each month a copy of **VOLUNTEER FIREMEN**, the professional journal of the section.

In addition the company itself will receive the regular publications for members of the N.F.P.A. described below. These contain valuable and authoritative material, including illustrated reports on important fires, the technique of fire fighting and fire prevention.

Quarterly Magazine. A chronicle of the Association's activities, with valuable articles covering a wide range of matters relating to fires. These are prepared by leading authorities and cover such subjects as municipal and rural fire departments, latest results of fire research, methods of dealing with special fire hazards, including flammables and explosives, and reports of conflagrations and interesting fires.

Proceedings of Annual Meeting. A stenographic record of the transactions of the Association and the discussions incident to the receipt of the reports of its technical committees and adoption of its standards.

News Letter. A monthly bulletin to inform members of the latest developments in the fire field. Many publications other than those of the Association are rendered available to members through this medium. (Twenty-two important publications last year.)

Year Book and Directory. Complete list of members with addresses. Arranged alphabetically and geographically.

Index to subjects covered in the Printed Records. (Proceedings, Quarterly, etc.)

Committee Reports. Over 40 technical committees make regular reports to the Association. These are printed and made available to members for discussion prior to their being adopted by the Association.

Special Bulletins. Numerous special bulletins are mailed to members from time to time. These cover a wide variety of topics. Typical subjects covered are successful fire prevention campaigns and special reports on major conflagrations.

Educational Material, Posters, Etc. Educational literature, posters and pamphlets for the use of members are prepared, including a special budget of material for Fire Prevention Week observances.

Special Information Service

Members are privileged to write the Executive Office for information on their special problems. Much material other than that published is thus made available to members from the extensive files and library built up over a period of 37 years.

Executive Office

National Fire Protection Association

60 Batterymarch Street, Boston, Massachusetts

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